

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A honeycomb structure comprising a plurality of cells, each cell being surrounded by cell walls and functioning as a fluid passage, predetermined cells being plugged by a plugging material at one end face, remaining cells being plugged by the plugging material at the other end face, wherein:

a Young's modulus of the plugging material is lower than that of the cell wall,
a porosity of the plugging material is 105% or more with respect to a porosity of the cell wall,

a thickness of the cell wall is 400 μ m or less, and
the plugging material comprises silicon carbide.

2-3. (Canceled)

4. (Previously Presented) The honeycomb structure according to claim 1, wherein the porosity of the cell wall is 46% or more.

5. (Canceled)

6. (Previously Presented) The honeycomb structure according to claim 1, wherein a material for the cell wall is porous ceramic.

7. (Canceled)

8. (Previously Presented) The honeycomb structure according to claim 1, wherein the predetermined cells plugged at one end face and the remaining cells plugged at the other end face are arranged alternately so as to form checkerboard patterns at the end faces.

9-23. (Canceled)

24. (Previously Presented) The honeycomb structure according to claim 1, wherein the cell wall comprises SiC.

25. (Previously Presented) The honeycomb structure according to claim 1, wherein the material of the cell wall is the same as the plugging material.

26. (New) The honeycomb structure according to claim 1, wherein the plugging material is formed from a pore forming agent having an amount of 0.1 to 20 parts by mass with respect to 100 parts by mass of a ceramic raw material.